

through more than one year, but it is deemed even more important to emphasize the necessity for clear and accurate expression in all subjects of the curriculum, and thus to create an atmosphere favourable to the correct use of the language. . . ."

"General economics should be included in all engineering curricula. . . ." "The criteria and technique of engineering economy, as related to costs, economy of design and economy of selection and application should be taught by engineers in connection with engineering subjects."

"It is recommended that elimination of unsuitable students be made as early as possible . . . and that the abler students especially, should be taught to depend upon their own resources to as great an extent as circumstances justify, and increasingly in the senior years."

Space does not permit reference to the recommendation regarding specific studies. One's excuse for dealing at such length with aims and curricula is the keen interest which so many graduates have shown in these matters.

Since the general lines on which we were proceeding seemed to be in accord with the best opinion, important changes in the curriculum have not been numerous. At least as much attention has been given to improved methods of instruction. The post-war generation of students has been much discussed. Perhaps for a time they were not quite so keen as their predecessors. Perhaps, on the other hand, more was demanded of them. At all events a more thorough preparation before entry was deemed indispensable, and accordingly the matriculation standard was raised by about one year. For most of the entrants from the province of Quebec this means one year in the Faculty of Arts; but the best secondary schools in some of the other provinces can meet the requirements quite satisfactorily. Naturally the number of students entering was reduced for the time being, and the effect of this will be felt in the upper classes for two or three years yet. The freshman class this year is about the same in number as before the change in the matriculation standard. In raising the entrance standard there was no thought of increasing the total content of the undergraduate course. It was hoped that the average student would be enabled to do more thorough work, and that the proportion of eliminations for academic reasons would be reduced. Both these hopes are being fairly realized.

Shopwork, at one time considered a very important feature, has been abolished except in a specialized form for mechanical engineering students. It was increasingly realized that student practice in the shops was far inferior to experience under commercial conditions, and that the time and effort required could be used to better advantage in other ways. As a substitute, all students, before proceeding to a degree, are now required to have at least six months experience in engineering or industrial

work. Under present conditions students have little difficulty in fulfilling this requirement. A faculty committee gives its aid in making suitable connections. The industries are every year showing greater interest in making contacts with undergraduates, which in about fifty per cent of the cases lead to permanent connections. This vacation work is in part a period of individual adjustment and experiment for both industry and student, while the advantage to the latter of experience in the realities of engineering and industrial life, particularly on the personal and human side, is obvious.

In mining, the former "trip" or school of inspection has been replaced by a season's work in mining or metallurgical plants, under the supervision as occasion requires of a member of the staff.

In electrical engineering the growing importance of electrical communications has led to the organization of a senior option maintained at first with the valued cooperation of the Department of National Defence, but now taken over by the departmental staff.

The Department of Mechanical Engineering has arranged a senior option leading to work in aeronautical engineering. Full training in this branch is so specialized that it must be left to the graduate school.

Beginning next session, it is intended greatly to improve the course in chemical engineering. A new professor will, it is expected, be appointed whose duty it will be to bridge the gap between the engineering and chemical sides. He will doubtless deal with the problems of design and operation relating to the principal unit processes connected with the chemical industry.

A course in the preparation of reports and in public speaking has been established under the supervision of Professors French and Wood. Instruction is largely carried on by means of practice and criticism rather than by formal precept. The appeal of this course has been such that the sophomores to whom it is given have requested a double ration; and upon the request of a large number of the senior class a course in public speaking has been organized for them.

With the co-operation of the St. John Ambulance Association, a course in First Aid has been organized by Professor McBride, who has had much experience in that line of work. Students of the second, third and fourth years are availing themselves in large numbers of the opportunity.

In general, there has been an effort to reduce the number of lectures wherever possible; several descriptive courses have been abolished, the student being encouraged to obtain readily accessible information for himself. There has also been an extension of supervised problem work, with or without explanatory lectures. All this is in reality an effort to replace lectures so far as practicable by tutorial instruction. The engineering library has been greatly augmented and placed in charge of a trained assistant. Rigid attendance rules have been